Fall 2006

BOOK REVIEW of *Oceans of Kansas: A Natural History of the Western Interior Sea* by Michael J. Everhart

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Published in GREAT PLAINS RESEARCH 16:2 (Fall 2006).

BOOK REVIEWS

Oceans of Kansas: A Natural History of the Western Interior Sea. By Michael J. Everhart. Bloomington: Indiana University Press, 2005. xiv + 322 pp. Tables, figures, color plates, map, references, index. $39.95 cloth.

Just as there are seashells on Mt. Everest, there is an exceptional wealth of fossil remains of marine organisms preserved in the chalk of western Kansas. This Cretaceous-aged rock, and the fossils therein, were deposited at a time when a great sea cut northward across the interior of the continent around 85 million years ago, inspiring the provocative title of Everhart's book. The title is true to its subject: documentation of the Cretaceous fossils of western Kansas, their geographic and stratigraphic occurrences, and the inferences that paleontologists can make about how the organisms represented by these fossils may have once lived and interacted with one another.

Oceans of Kansas is organized into thirteen chapters and a short epilogue. The first two chapters deal with the geological context of the chalk deposits themselves, as well as the scientists and naturalists who discovered and developed that context, from Lewis and Clark through modern workers. While chapter three broadly covers invertebrates, plants, and trace fossils, each of the subsequent nine chapters focuses on the fossil record and paleobiology of an individual vertebrate group, including sharks, bony fishes, turtles, elasmosaurs, pliosaurs and polycotylids, mosasaurs, pterosaurs, toothed birds, and dinosaurs. Chapter thirteen summarizes the book.

My most significant criticism of *Oceans of Kansas* is that its intended audience is not entirely clear. While the wonderfully animated dust jacket illustration by Dan Varner (who provides a total of eleven beautiful color plates), featuring a large shark leaping from the water with a mosasaur in its jaws, strongly suggests a popular book intended for the interested layperson, the text is probably too technical in places to hold that person's attention for long. For example, the text often focuses intently upon the taxonomic histories, morphological details, and occurrence records of individual specimens and/or taxa (species or genera), perhaps occasionally at the expense of more general information and discussion of scientific principles and methods. Also, jargon sometimes goes undefined when introduced. If such technical fine points present obstacles for the average layperson, amateur and professional paleontologists may find this attention to detail especially helpful and desirable, particularly passages promoting correct nomenclature and summarizing the stratigraphic occurrences of individual taxa. I have other minor criticisms, including the extensive and unnecessary use of quoted text from other works, redundancies, and some chapters that could have been more efficiently organized.

That said, as a needed summary of our knowledge about the fossils found in the Cretaceous rocks of western Kansas and elsewhere in the Great Plains, Everhart's book is a success. It is very well documented and referenced. Everhart clearly has a strong grasp of the primary literature and also demonstrates his passionate interest in and knowledge of the fossil material itself, which he has spent many years collecting and studying. Interpretations of the natural histories of the ancient subjects of the book are generally well supported and tempered by the information available. Finally, the book is well illustrated throughout by photographs and drawings of important fossils. I recommend it to amateur and professional paleontologists, and particularly those interested in fossil vertebrates and the history of paleontological collecting in the Great Plains. **Jonathan R. Hendricks**, *Department of Geology, University of Kansas.*